

99905

**Shears, Beverly**

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**From:** Devi, Sarvamangala  
**Sent:** Monday, July 28, 2003 3:00 PM  
**To:** Shears, Beverly  
**Subject:** 10/060,521

Beverly:

Would you please perform a sequence and an interference search for a polypeptide comprising an amino acid sequence having at least 75% identity to SEQ ID NO: 2 in application 10/060,521?

Thanks.

S. DEVI, Ph.D.  
AU 1645  
CM1-7E15  
Mailbox: CM1-7E12

CC further identifying MDR efflux pumps that may be used as drug targets to  
CC increase the sensitivity of cells to antibacterial agents. Cells  
CC comprising the identified pumps may be used to screen for potential  
CC blockers or inhibitors of MDR pump function or gene expression.  
XX  
SQ Sequence 498 AA;

Query Match 99.3%; Score 2522; DB 22; Length 498;  
Best Local Similarity 99.2%; Pred. No. 5.5e-189;  
Matches 494; Conservative 2; Mismatches 2; Indels 0; Gaps 0;  
Qy 1 MSKIELKQLSPAYDNOEVLFDQANITMDTNKGLIGRNGRKTLLRLQKLDYQGE 60  
Db 1 MSKIELKQLSPAYDNOEVLFDQANITMDTNKGLIGRNGRKTLLRLQKLDYQGE 60  
Qy 61 ILHQVDFVFPQTVABEQQLTYVLEQVTSFEQWELERELTLNVDPEVLNRPFSLSGG 120  
Db 61 ILHQVDFVFPQTVABEQQLTYVLEQVTSFEQWELERELTLNVDPEVLNRPFSLSGG 120  
Qy 121 ETKVLGLLFTIENAPPLIDEPTNHLDLAGROOVAEYLKCKGFGFVSHDRAPVDEV 180  
Db 121 ETKVLGLLFTIENAPPLIDEPTNHLDLAGROOVAEYLKCKGFGFVSHDRAPVDEV 180  
Qy 181 DHILATEKSQLTLYQGNFSIYEEQKLRDAPFELAENEKI KGVNRLKETARKKAESNMR 240  
Db 181 DHILATEKSQLTLYQGNFSIYEEQKLRDAPFELAENEKI KGVNRLKETARKKAESNMR 240  
Qy 241 EGDYGNVAKESGSGAIFDTGAIGARAARVNRKSKHIQORAEQTLAEKELLDLEVIDPL 300  
Db 241 EGDYGNVAKESGSGAIFDTGAIGARAARVNRKSKHIQORAEQTLAEKELLDLEVIDPL 300  
Qy 301 SMDYQPTHKTLTVEELRLGYEKWLFAPLSFSINAGSIVGITGNGSGKSLIQYLLD 360  
Db 301 SMDYQPTHKTLTVEELRLGYEKWLFAPLSFSINAGSIVGITGNGSGKSLIQYLLD 360  
Qy 361 NFSGDSEGEATLAHQLTISYVRODYEDNOGTLSEPAEKQQLDYTOFLNNLRKLGMERAVP 420  
Db 361 NFSGDSEGEATLAHQLTISYVRODYEDNOGTLSEPAEKQQLDYTOFLNNLRKLGMERAVP 420  
Qy 421 TNRIEQMSGQRKKVEVAKSLSSASAEIYTWDEPLNVDVFNHOOLEALILSVKPAMLVIE 480  
Db 421 TNRIEQMSGQRKKVEVAKSLSSASAEIYTWDEPLNVDVFNHOOLEALILSVKPAMLVIE 480  
Qy 481 HDAHFMMKKTIDKKIVLKS 498  
Db 481 HDAHFMMKKTIDKKIVLKS 498

Search completed: July 28, 2003, 15:39:59  
Job time : 99 secs

See ID No: 2

RESULT 2  
ID ABB47285  
ID ABB47285 standard; Protein; 498 AA.

AC ABB47285;

DT 31-JAN-2002 (first entry)

XX Enterococcus faecalis polypeptide Abc23.

XX MDR; efflux pump; multidrug resistance; antibacterial; drug target.

XX Enterococcus faecalis.

XX WO200179257-A2.

XX 25-OCT-2001.

XX 12-APR-2001; 2001WO-US12230.

XX 14-APR-2000; 2000US-197349P.

XX (PHYT-) PHYTERA INC.

XX Davis DV, Rogers BL, White AC;

XX WPI; 2001-626526/72.

XX N-PSDB; ABA82960.

XX Determining whether a candidate nucleotide or polypeptide  
XX encodes/functions as a multidrug resistance (MDR) efflux pump comprises  
XX searching a database of nucleotide/polypeptide sequences for those with  
XX high identity to known MDR pumps -

XX Claim 10; Fig 26; 139pp; English.

XX The invention relates to determining whether a candidate nucleotide  
XX (ABA82938-ABA82971) or polypeptide (ABB47263-ABB47296) encodes/functions  
XX as a multidrug resistance (MDR) efflux pump comprising, searching a  
XX database for sequences high identity known MDR efflux pumps and then  
XX deleting/mutating an identified region of the DNA in a bacterial cell and  
XX determining whether the bacterial cell exhibits increased or decreased  
XX sensitivity to an antibacterial agent The identified pumps are useful for